

REMARKS

Claims 1, 4 and 12 are amended. Claims 1-8 and 10-17 remain in the Application. In an Office Action mailed December 15, 2004, the Patent Office rejected claims 1, 4-5, 8-14 and 17 under 35 U.S.C. §102(e) as anticipated by U.S. Patent Application No. 2001/0037821 of Staley (Staley). The Patent Office rejected claims 2-3, 6-7 and 15-16 under 35 U.S.C. §103(a) as obvious over Staley. Reconsideration of the pending claims is respectfully requested in view of the above amendments and the following remarks.

Independent claim 1 relates to a method including removing material from a surface of a wafer by chemical mechanical polishing the wafer with a slurry comprising an oxidation agent for the material and a buffer. The method also includes monitoring a signal representative of a current required to rotate the wafer as a measure of a material removal endpoint. In terms of the slurry, the buffer in the slurry is present in an amount sufficient to at least double a differential between a signal measured at a material removal start point and the material removal endpoint relative to a slurry without the buffer. Support for the amount of buffer may be seen in the Application at, for example, page 9, paragraph 0034.

Staley teaches a method-component polishing and/or cleaning composition wherein the components are mixed at a point-of-use or immediately before delivery to the point-of-use. Staley describes various components that may or may not be used in embodiments of the polishing and/or cleaning composition. Both components include an abrasive, an oxidizing agent, a catalyst, a film forming agent, a complexing agent, a surfactant, a pH adjuster, and a stabilizer. See page 2, paragraph 0013 through page 3, paragraph 0024.

Staley also talks about providing sensors in a system, including sensors to sense changes in the friction or torque between the polishing pad on the substrate. See pages 5-6, paragraph 0039.

Independent claim 1 is not anticipated by Staley, because Staley does not describe removing a material from a surface of a wafer by chemical mechanical polishing the wafer with a slurry comprising, among other things, a buffer present in an amount sufficient to at least double a differential between a signal measured at a material start point and the material removal endpoint relative to a slurry without the buffer. Staley is silent as to amounts of its complexing agents or pH stabilizers. Thus, it is unclear, whether either of these components, assuming they can be classified as a buffer, which does not conceded, Applicants continue to believe does not necessarily follow from the teachings of Staley, is present in an amount to effect a current differential.

For the above stated reasons, claim 1 is not anticipated by Staley.

Independent claim 4 describes a composition including a buffer present in an amount sufficient to at least double a differential between a signal measured at a material removal start point and the material removal endpoint relative to a slurry without the buffer. Claim 4 is not anticipated by Staley, because Staley does not describe a buffer or the effect any amount of any such buffer would have on its composition.

Claims 5, 8 and 10-11 depend from claim 4 and therefore contain all the limitations of that claim. For at least the reasons stated with respect to claim 4, claims 5, 8 and 10-11 are not anticipated by Staley.

Independent claim 12 relates to a kit including a buffer in an amount sufficient to at least double a differential between a signal measured at a material removal start point and the material removal endpoint relative to a slurry without the buffer. As noted above, with respect to claim 4, claim 12 is not anticipated by Staley, because Staley does not describe such a buffer or the effect any amount of any such buffer would have on its composition.

Claims 13-14 and 17 depend from claim 12 and therefore contain all the limitations of that claim. For at least the reason stated with respect to claim 12, claims 13-14 and 17 are not anticipated by Staley.

Applicants respectfully request that the Patent Office withdraw the rejection to claims 1, 4-5, 8-14 and 17 under 35 U.S.C. §102(e) as anticipated by Staley.

The Patent Office rejects claims 2-3, 6-7 and 15-16 as obvious over Staley. Applicants believe the claims are not obvious over Staley for the reason that Staley does not teach a method where a buffer is used (claim 1) or a composition (claim 4) or kit (claim 12) with a buffer in an amount sufficient to at least double a differential between a signal measured at a material removal start point and the material removal endpoint relative to a slurry without the buffer. There is further no motivation in Staley for such method, composition or kit.

Applicants respectfully request that the Patent Office withdraw the rejection to claims 2-3 (which depend from claim 1), 6-7 (which depend from claim 4) and 15-16 (which depend from claim 12) under 35 U.S.C. §103(a) as obvious over Staley.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

Respectfully submitted,

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5/18/05
Date